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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,498	12/21/2001	Ulrich Peuchert	SGW-115	4480

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MILLEN, WHITE, ZELANO & BRANIGAN, P.C.
2200 CLARENDON BLVD.
SUITE 1400
ARLINGTON, VA 22201

EXAMINER

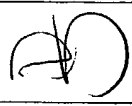
BOLDEN, ELIZABETH A

ART UNIT PAPER NUMBER

1755

DATE MAILED: 02/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/024,498	Applicant(s) PEUCHERT, ULRICH 	
	Examiner Elizabeth A. Bolden	Art Unit 1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-12,14-20,22-26,28-35 and 46-68 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1-5,8-12,14-19,22-26,28-35,48,49 and 51 is/are allowed.
- 6) ☒ Claim(s) 6,20,46,47,50 and 52-62 is/are rejected.
- 7) ☒ Claim(s) 63-68 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Any rejections and or objections, made in the previous Office Action, and not repeated below, are hereby withdrawn.

Claim Interpretation

The Examiner would like to state for the record how the dependent claims 57-62 are being interpreted. Claims 57-62 are identical except for from which claim it depends, for example claim 57 depends from claim 6 and claim 58 depends from claim 20. The basic claim reads "An alkali-free aluminoborosilicate glass according to claim (X) that contains As_2O_3 or Sb_2O_3 , or does not contain SnO_2 or Cl^- ." Where X is one of the following claims 6, 20, 53, 54, 55, or 56. In reading the claim, the Examiner interprets the limitation giving the broadest meaning of the claim as follows: if the composition has As_2O_3 or Sb_2O_3 , the claim limitation is satisfied irrelevant of whether the composition further comprises SnO_2 or Cl^- . However, if the composition does not comprise As_2O_3 or Sb_2O_3 , the composition must not comprises either SnO_2 or Cl^- . As such a composition that comprises Sb_2O_3 and SnO_2 or a composition that does not comprise Cl^- yet does comprise SnO_2 , both compositions would be applicable prior art, as would a composition that did not comprise any of the four components. If the Applicants' have any questions about how these claims were interpreted please contact the Examiner for further explanation.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 57-62 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The missing subject matter for claims 57-62 relates to the negative limitation of Cl^- in the claims. However, support for the negative limitation of SnO_2 and ZrO_2 is found on page 9, lines 8-12.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 20, and 53-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narita et al., U.S. Patent 6,468,933.

Narita et al. teach an alkali-free glass consisting of 40-70 wt% SiO_2 , 5-20 wt% B_2O_3 , 6-25 wt% Al_2O_3 , 0-10 wt% MgO , 0-15 wt% CaO , 0-10 wt% SrO , 0-30 wt% BaO , 0-10 wt% ZnO , 0.05-2 wt% SnO_2 , and 0.005-1 wt% Cl_2 . See abstract of Narita et al., column 2, line 40 to column 3, line 65, and column 4, lines 15-21. Narita et al. teach that glass can be as a substrate for display technologies. See column 1, lines 7-10.

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Narita et al. differ from the instant claims by not teaching specific examples that lie within the compositional ranges nor ranges of glass components which are sufficiently specific to anticipate the claim limitations. However, the compositional ranges of Narita et al. overlap the compositional ranges of claims 6, 20, and 53-56. Overlapping ranges have been held to establish *prima facie* obviousness. See MPEP 2144.05.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected from the overlapping portion of the ranges of Narita et al. because overlapping ranges have been held to establish *prima facie* obviousness. See MPEP 2144.05.

Claims 6, 20, 46, 47, 50, 52, 57, and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lautenschläger et al., U.S. Patent 6,465,381.

Lautenschläger et al. teach an alkali-free glass consisting of >60-65 wt% SiO₂, 6.5-9.5 wt% B₂O₃, 14-21 Al₂O₃, 1-8 wt% MgO, 1-6 wt% CaO, 1-9 wt% SrO, 0.1-3.5 wt% BaO, 0.1-1.5 wt% ZrO₂, 0.1-1 wt% SnO₂, 0.1-1 TiO₂ and 0.001-1 wt% CeO₂. See abstract of Lautenschläger et al., column 5, line 25 to column 6, line 55, and column 7, lines 33-36. Lautenschläger et al. teach that glass can be as a substrate for display technologies. See Abstract of Lautenschläger et al. Lautenschläger et al. teach that the glass has a density of less than 2.5 g/cm³. See column 11, line 55. The reference also teaches the use of refining agents such as As₂O₃, Sb₂O₃, Cl⁻, F⁻, and SO₄⁻. See column 7, lines 33-41.

Lautenschläger et al. differ from the instant claims by not teaching specific examples that lie within the compositional ranges nor ranges of glass components which are sufficiently

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specific to anticipate the claim limitations. However, the compositional ranges of Lautenschläger et al. overlap the compositional ranges of claims 6, 20, 46, 47, 50, 52, 57, and 58. Overlapping ranges have been held to establish *prima facie* obviousness. See MPEP 2144.05.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected from the overlapping portion of the ranges of Lautenschläger et al. because overlapping ranges have been held to establish *prima facie* obviousness. See MPEP 2144.05.

Claims 6, 20, 46, 47, 50, and 52-62, are rejected under 35 U.S.C. 103(a) as being unpatentable over Watzke, German Patent, DE 196 01 922 A1.

An English translation of DE 196 01 922 A1 accompanied a previous action. In reciting this rejection, the examiner will cite this translation.

Watzke teaches an alkaline earth aluminoborosilicate glass consisting of 50-65 wt% SiO₂, 5-15 wt% B₂O₃, 10-20 Al₂O₃, 0-10 wt% MgO, 0-20 wt% CaO, 0-20 wt% SrO, 0-20 wt% BaO, 0-10 wt% ZnO, 0.01-1 wt% SnO, 0.1-2 wt% ZrO₂, 0-10 La₂O₃, 0-10 wt% Nb₂O₅, 0-10 wt% Ta₂O₅ and 0-10 wt% TiO₂ and other minor components. See the Derwent Abstract of Watzke and page 9, lines 6-11. More specifically, Watzke teaches the compositional ranges are 53-63 wt% SiO₂, 5-15 wt% B₂O₃, 12-20 Al₂O₃, 0-5 wt% MgO, 2-10 wt% CaO, 0-10 wt% SrO, 3-15 wt% BaO, 0.01-1 wt% SnO, and 0.1-1 wt% ZrO₂. See page 9, lines 16-18. Watzke teaches that glass can be as a substrate for display technologies or as thin layer solar cells. See page 2, lines 14-19. Watzke teaches that the alkali free flat glasses would have a density less than or equal to 2.6 g/cm³. See page 6, line 8.

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Watzke differs from the instant claims by not teaching specific examples that lie within the compositional ranges nor ranges of glass components which are sufficiently specific to anticipate the claim limitations. However, the compositional ranges of Watzke overlap the compositional ranges of claims 6, 20, 46, 47, 50, and 52-62. Overlapping ranges have been held to establish *prima facie* obviousness. See MPEP 2144.05.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected from the overlapping portion of the ranges of Watzke because overlapping ranges have been held to establish *prima facie* obviousness. See MPEP 2144.05.

Allowable Subject Matter

Claims 1-5, 8-12, 14-19, 22-26, 28-35, 48, 49, and 51 are allowed.

The prior art fail to disclose or suggest an alkali-free aluminoborosilicate glass consisting of the components as recited in instant claims 1-5, 8-12, 14-19, 22-26, 28-35, 48, 49, and 51. Specifically, an alkali-free aluminoborosilicate glass consisting only of the following components in the claimed weight percent amounts; SiO₂, B₂O₃, Al₂O₃, MgO, CaO, SrO, BaO, ZnO and the fining agent: As₂O₃, Sb₂O₃, CeO₂, Cl⁻, F⁻, and SO₄⁻² as recited in the claims.

Claims 63-68 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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The following is a statement of reasons for the indication of allowable subject matter:

The further limitation of requiring either ZrO_2 or SnO_2 NOT be present in the composition renders these claims as allowable if written in independent form.

Response to Arguments

Applicant's arguments with regards to the 35 USC 103 rejection over Nishizawa et al. '937, see pages 15-17, filed 14 November 2003, with respect to claims 1-13, 16-27, 30-37, and 48-56 have been fully considered and are persuasive. The 35 USC 102(e) rejection in view of Nishizawa et al. of claims 1-13, 16-27, 30-37, and 48-56 has been withdrawn. Nishizawa et al. disclose the composition in terms of mol percent. Applicants' argue that while the theoretical composition does overlap the instant invention the reference had no teaching of how one might have been motivated from the reference to choose that composition which overlaps the instant claims due to the difficulties in converting a composition from mole percent to weight percent.

Applicant's arguments in view of the 35 USC 103(a) rejections over Narita et al., Watzke, and Lautenschläger et al. filed 14 November 2003 have been fully considered but they are not persuasive.

Applicant argues that the glasses of the instant invention are not obvious over Narita et al., (U.S. Patent 6,468,933) since the reference teaches very broad ranges that includes glass compositions outside the glass composition as claimed in the instant application. This is not deemed persuasive since Narita et al. do teach compositional ranges that overlap the

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compositional ranges of claims 6, 20, and 53-56. Overlapping ranges have been held to establish *prima facie* obviousness. See MPEP 2144.05.

Applicants' argue that there is no motivation to select from the overlapping ranges of components of the reference "to achieve the presently claimed glasses having the desired properties". However, this is not deemed persuasive since there are no properties claimed in the currently rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicants further argue that the ranges of Narita et al. are very broad and do not give guidance towards the presently claimed glass. This is not deemed persuasive since Narita et al. do teach compositional ranges that overlap the compositional ranges of claims 6, 20, and 53-56. Overlapping ranges have been held to establish *prima facie* obviousness. See MPEP 2144.05. Furthermore, while there are no anticipatory examples, the examples and the preferred component ranges of the reference guide one of ordinary skill in the art to a narrowed range of components, which overlaps the instant claims 6, 20, and 53-56. See above rejection.

Applicant argues that the instant invention is not obvious over Lautenschläger et al., (US 6,465,381) since the reference teaches broad ranges that include glass compositions outside the glass composition as claimed in the instant application. This is not deemed persuasive since Lautenschläger et al. do teach compositional ranges that overlap the compositional ranges of claims 6, 20, 46, 47, 50, 52, 57, and 58. Overlapping ranges have been held to establish *prima facie* obviousness. See the above rejection and MPEP 2144.05.

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Furthermore, while there are no anticipatory examples, the examples and the preferred component ranges of the reference guide one of ordinary skill in the art to a narrowed range of components, which overlaps the instant claims 6, 20, 46, 47, 50, 52, 57, and 58. See above rejection.

Applicant argues that the instant invention is not obvious over Watzke, (DE 196 01 922 A1) since the reference does not teach any specific examples of the composition nor the specific ratio and content of MgO, CaO, BaO, and SrO. This is not deemed persuasive since the reference is not limited to the examples alone for disclosure. See MPEP 2123. Watzke does teach compositional ranges that overlap the compositional ranges of claims 6, 20, 46, 47, 50, and 52-62. Overlapping ranges have been held to establish *prima facie* obviousness. See MPEP 2144.05.

Furthermore, while there are no anticipatory examples, the examples and the preferred component ranges of the reference guide one of ordinary skill in the art to a narrowed range of components, which overlaps the instant claims 6, 20, 46, 47, 50, and 52-62. See above rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth A. Bolden whose telephone number is 571-272-1363. The examiner can normally be reached on 9:30 am-7:00 pm with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark L. Bell can be reached on 571-272-1362. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EAB
4 February 2004


KARL GROUP
PRIMARY EXAMINER
GROUP 1755